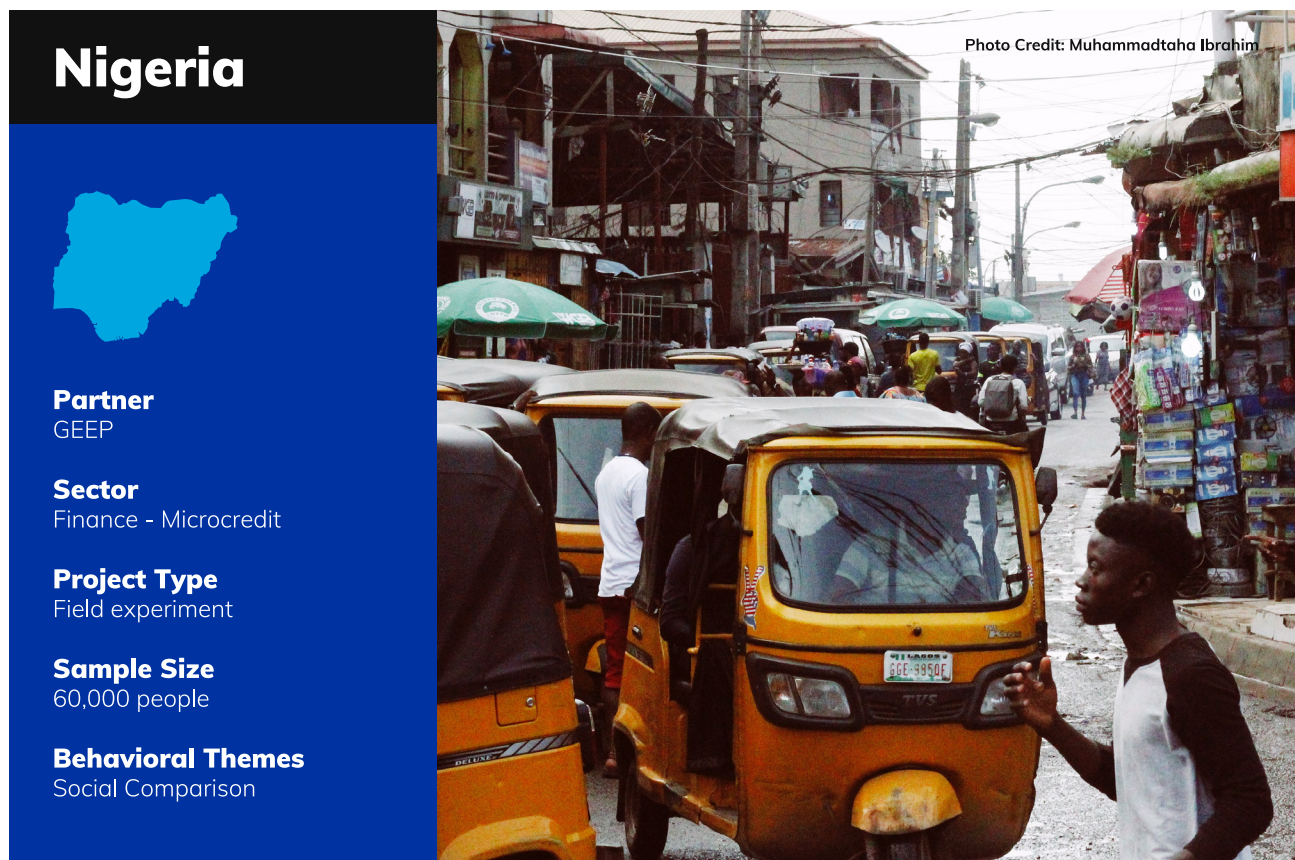


# Government Enterprise Empowerment Programme (GEEP)



## Summary

As a part of the first Policy Innovation Unit in Nigeria - a consortium of organizations established to improve the efficacy and delivery of social protection programs - We designed and tested the effect of social comparison SMS prompts on repayment among beneficiaries of the largest micro-credit scheme in Africa, Government Enterprise Empowerment Programme (GEEP), in a Randomized Controlled Trial (RCT).

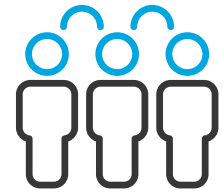
For this, 60,000 GEEP MarketMoni beneficiaries were assigned to one of four color categories based on pre-defined criteria related to their outstanding repayment. Within each color category, beneficiaries were randomly assigned to either control or treatment groups, after which they received an SMS every 2 weeks (over a 6-week period) informing them of their color category based on their outstanding repayment. Following the lapse of the intervention period, the key findings from the intervention were as follows:

- Across all colors, beneficiaries in the treatment groups paid, on average, 19% more than those in the control group.
- Beneficiaries in the orange color category treatment had 56.9% higher repayments compared to their counterparts who were in the control group.



## A Behavioral Science Approach

The Government Enterprise Empowerment Programme (GEEP) is a government-led effort to ensure beneficiaries adopt digital financial services. The GEEP program provides beneficiaries with loans ranging between N10,000 and N100,000 which, after a 2-week moratorium, is to be paid back in equal weekly installments over a 6-month period (i.e. 24 payments in total).



As is typical of most microcredit programs, loan repayment was a primary issue being faced by GEEP. We discovered that GEEP repayment barriers, although driven by beneficiary behavior, were often as a result of a combination of systematic and external barriers such as:

- *The lack of repercussions (social, financial, moral, etc) which made the decision to not repay easy*
- *Immediate/competing financial needs which limit the flexibility of repayments*

Given this, we sought to test the effect of social comparison and repercussive SMS prompts which assigned beneficiaries to different categories based on their (relative) repayment behavior, in improving loan repayment.

## Design

For this test, we sampled beneficiaries from a segment pool which is referred to as the 'antagonist group' by GEEP - customers who have made no single repayment since loan cash-out. As such, the color allocation criteria were primarily hinged on how far along the loan tenor the beneficiaries were since all customers were in default.

We layered on the color categorizations, two behaviorally framed SMS notifications, which we tested separately. One was designed to purely communicate the color categories of beneficiaries, while the other incorporated a 'consequence' element. This was done to assess if beneficiaries' response to the SMSes was bolstered by the fear of a negative consequence or was simply as a result of the colors in themselves and what they may connote socially.



The SMSes were sent to beneficiaries, based on their treatment assignment, every week for a period of 6 weeks.

During this period, beneficiaries' repayment records were closely monitored and their color categories were regularly updated based on their repayment performance.



# Interventions

To understand the identity effects on giving, participants were randomly assigned to one of the four following treatments. For each treatment, we conducted a short group task where participants were required to sort beans into different buckets as a team. The team payout (initial endowment) was based on the quantity of beans sorted, incentivizing teams to work together. Further, the winning team was given a flat bonus on top of their earnings to create a sense of competition with the other team.

We then used this identity to randomly assign them to different groups that would define who they played the lab games with.



**GEEP TraderMoni Database**



**Yellow Group: 15,000**  
4-8 Weeks in Default

- 5,000 Control
- 5,000 Pure Color SMS
- 5,000 Color SMS with Consequence



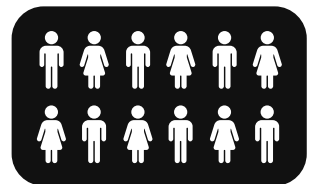
**Orange Group: 15,000**  
8-12 Weeks in Default

- 5,000 Control
- 5,000 Pure Color SMS
- 5,000 Color SMS with Consequence



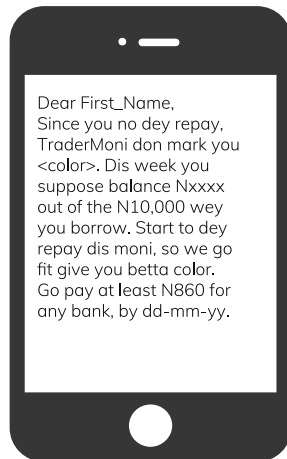
**Red Group: 15,000**  
12-24 Weeks in Default

- 5,000 Control
- 5,000 Pure Color SMS
- 5,000 Color SMS with Consequence

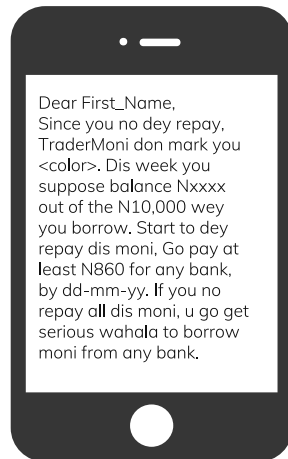


**Black Group: 15,000**  
24+ Weeks in Default

- 5,000 Control
- 5,000 Pure Color SMS
- 5,000 Color SMS with Consequence

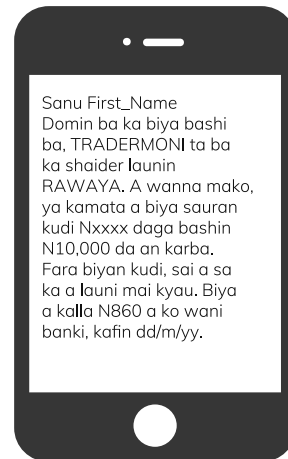


Pure Color SMS

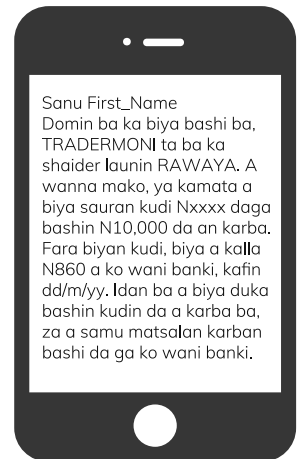


Color SMS with Consequence

Pidgin  
**Pure Colour SMS**



Pure Color SMS



Color SMS with Consequence

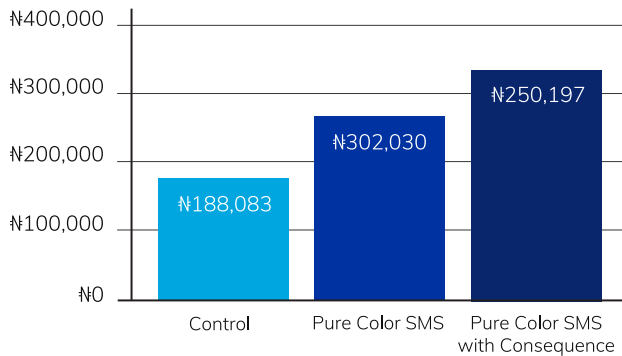
Hausa  
**Pure Colour SMS with Consequence**



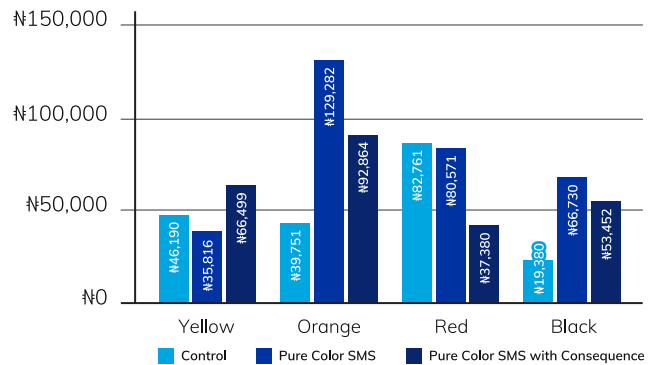
## Results

While both SMS treatments saw an improvement in repayment, the pure color SMS treatment did better - it yielded a 59% increase in total payment across all colors. It also led to a 225% increase in the orange color category specifically.

**Total payments across overall treatment arms**  
(Control vs Pure Color SMS vs Color SMS with Consequence)

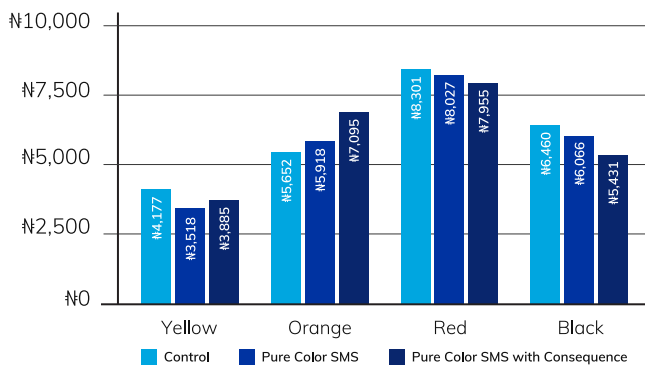


**Total payments across color categories**  
(Control vs Pure Color SMS vs Color SMS with Consequence)

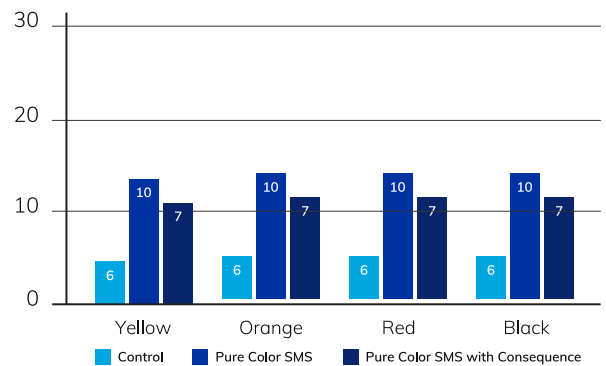


From an overall perspective (all colors combined), the pure color SMS treatment yielded the highest repayment over the 6 weeks testing period. All individuals in this treatment arm made a combined payment of N302,030 - 60% higher than the combined payment from the control arm (N188,083). However, observing this effect within the color categories, we find that it was primarily driven by the orange color category, where we observed a 225% increase in repayment in pure color SMS treatment relative to the control.

**Average payments across color categories**  
(Control vs Pure Color SMS vs Color SMS with Consequence)



**Number of payments across color categories**  
(Control vs Pure Color SMS vs Color SMS with Consequence)



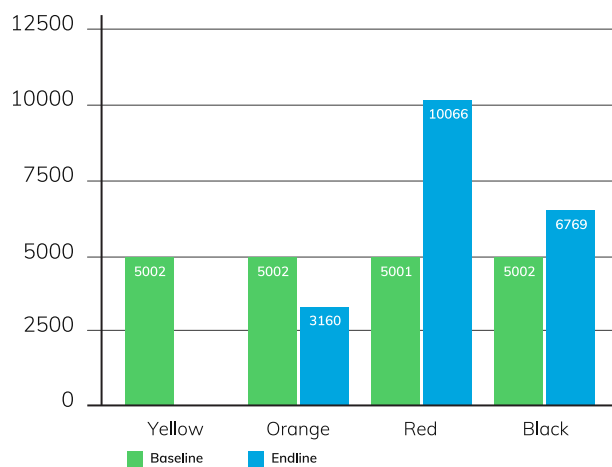
Surprisingly, this effect (in the pure color SMS treatment of orange category) was primarily driven by the number of individuals who made payment and not the payment amount.



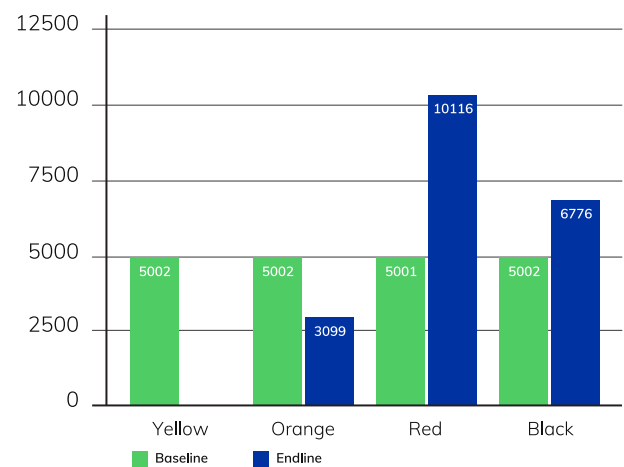
Photo Credit: Muhammadtaha Ibrahim

Despite the improvement in repayment in each SMS treatment, the majority of color movements were negative.

Movement between colors over entire intervention period (Pure Color SMS)



Movement between colors over entire intervention period (Color SMS with Consequence)



Notwithstanding the improvement in overall payment from both treatment arms, we found that most beneficiaries regressed during the course of intervention into worse colors: Red and Black. This suggests that while in relative terms (to the control group), the intervention was found to have positive associative effects, the majority of beneficiaries in each treatment arm were unresponsive to the social/relative ranking color SMS.



## Discussion and Exploration

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### **Expand the Orange color category to accommodate more beneficiaries**

Beneficiaries were found to be more receptive to the color categorization messages - particularly the pure color SMS for the Orange category. We believe the relatively strong effect of the Orange color was primarily as a result of the positioning of the Color - close to Red (danger) but just as close to (safety) - which induced some degree of risk compensation among beneficiaries.

As such, it may be worthwhile to leverage this underlying mechanism by expanding the criteria for the Orange color to enable it to accommodate more beneficiaries, including those outside the antagonist group.

### **Explore the use of commitment devices in making salient the need for repayment**

Despite the noticeable improvements in payments in the SMS treatment arms, the overall repayment rate within the entire sample was surprisingly low (0.2%). Given this, it may be necessary to explore the use of commitment devices, such as simple, personalized repayment calendars which beneficiaries are required to sign upon loan disbursement and over the course of repayment. Devices that require personalized action, such as these, tend to be effective in driving salience.

